

WE CLAIM:

1. A network interface device connectable to a network, said device being arranged to
5 receive a digital video data stream of a first resolution and, substantially in real time, to
launch data packets representing said digital video data stream onto said network, said device
comprising:

a video generator to produce from said video data stream of said first resolution a
video data stream of a second, lower resolution; and

10 a packetiser operable:

to format said video data stream of said second resolution into data packets to
be launched onto said network; and

to format at least that part of said video data stream of said first resolution
which is not represented by said video data stream of said second resolution
15 into data packets to be launched onto said network.

2. A device according to claim 1, comprising a multiplexer for multiplexing together
said data packets corresponding to said video data streams of said first and second
resolutions.

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3. A device according to claim 1, being arranged to launch said data packets
corresponding to said video data stream of said first resolution onto said network as a
multicast group.

25 4. A device according to claim 3, being arranged to launch said data packets
corresponding to said video data stream of said second resolution onto said network as a
second multicast group, different to said first multicast group.

5. A device according to claim 3, being arranged to format said data packets into
30 multicast IP/UDP (Internet Protocol / User Datagram Protocol) packets to launch onto said
network.

6. A device according to claim 1, in which:

said device is arranged to receive two or more input digital video data streams;

said video generator is arranged to produce two or more video data streams of said second resolution from respective input digital video data streams; and

5 said packetiser is arranged to format at least said parts of said video data streams of said first resolution into data packets and to format said video data streams of said second resolution into data packets.

7. A device according to claim 1, in which the or each video data stream of said second
10 resolution comprises an uncompressed video data stream.

8. A device according to claim 7, in which the or each video data stream of said second resolution conforms with the RGB 555 format, representing each of red, green and blue pixel values by 5 bits of a pixel word.

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9. A device according to claim 8, in which said packetiser is arranged to format the or each video data stream of said second resolution into RTP (Real time Transport Protocol) packets having a video line of data in each such packet.

20 10. A device according to claim 1, in which said packetiser is arranged to format the or each video data stream into RTP (Real time Transport Protocol) packets.

11. A device according to claim 10, in which said RTP packets carrying said video data stream of said first resolution conform to the BT.656 video encoding standard.

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12. A device according to claim 1, in which the or each video data stream of said first resolution comprises 625 lines or 525 lines per frame by 1440 samples per line.

13. A device according to claim 1, in which the or each video data stream of said second
30 resolution comprises either:

- 144 lines per frame by 180 samples per line in the case of a video data stream of said first resolution having 625 lines per frame; or

- 120 lines per frame by 180 samples per line in the case of a video data stream of said first resolution having 525 lines per frame.

14. A device according to claim 1, in which the or each video generator comprises a first
5 filter and subsampler for subsampling said video data in a line direction and a second
subsampler for subsampling said video data in another direction.

15. A device according to claim 1, in which said packetiser is arranged to format said
video data stream of said first resolution into data packets.

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16. A device according to claim 1, in which:

a subset of said video data stream of said first resolution can be derived from said
respective video data stream of said second resolution; and

15 said packetiser is arranged to format only a part, being all but said subset, of said
video data stream of said first resolution into data packets.

17. A device according to claim 1, in which:

said device is arranged to receive one or more audio and/or control data streams
associated with said digital video data stream;

20 said packetiser is arranged to format said audio and/or control data streams into data
packets; and

said network interface is arranged to launch said data packets of said audio and/or
control data streams onto said network.

25 18. A device according to claim 1, in which:

said video data stream of said first resolution represents an interlaced video signal;
and

30 said video generator is selectably operable to generate said video data stream of said
second resolution from only odd fields or from only even fields of said video data stream of
said first resolution.

19. A device according to claim 1, in which:

said video data stream of said first resolution represents an interlaced video signal;
and

said video generator is operable to generate a video data stream of said second
resolution from only odd fields and a video data stream of said second resolution from only
5 even fields of said video data stream of said first resolution.

20. Video source equipment comprising a network interface device according to claim 1.

21. Video destination equipment comprising a network interface device according to
10 claim 1.

22. A video network comprising:

one or more video handling devices each comprising a network interface device
according to claim 1; and

15 a data network linking said video handling devices.

23. A method of operation of a network interface device connectable to a network, said
method comprising the steps of:

receiving a digital video data stream of a first resolution; and

20 substantially in real time:

producing from said video data stream of said first resolution a video data stream of a
second, lower resolution;

formatting said video data stream of said second resolution into data packets to be
launched onto said network;

25 formatting at least that part of said video data stream of said first resolution which is
not represented by said video data stream of said second resolution into data packets to be
launched onto said network; and

launching said data packets representing said digital video data streams of said first
and second resolutions onto said network.

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24. Computer software having program code for carrying out a method according to claim
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25. A providing medium by which software according to claim 24 is provided.

26. A medium according to claim 25, said medium being a storage medium.

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27. A medium according to claim 25, said medium being a transmission medium.

28. A network interface device connectable to a network, said device being arranged to receive a digital video data stream of a first resolution and, substantially in real time, to launch data packets representing said digital video data stream onto said network, said device comprising:

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a video generator to produce from the video data stream of said first resolution a video data stream of a second, lower resolution; and

a packetiser operable:

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to format said video data stream of the second resolution into data packets of a first multicast group to be launched onto said network; and

to format at least that part of said video data stream of said first resolution which is not represented by said video data stream of said second resolution into data packets of a second multicast group, different to said first multicast

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group, to be launched onto said network.

23. A method of operation of a network interface device connectable to a network, said method comprising the steps of:

receiving a digital video data stream of a first resolution; and

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substantially in real time:

producing from said video data stream of said first resolution a video data stream of a second, lower resolution;

formatting said video data stream of said second resolution into data packets of a first multicast group to be launched onto said network;

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formatting at least that part of said video data stream of said first resolution which is not represented by said video data stream of said second resolution into data packets of a

second multicast group, different to said first multicast group, to be launched onto said network; and

launching said data packets representing said digital video data streams of said first and second resolutions onto said network.